

SERGIYEV, P.G.; MARUASHVILI, G.M.

Third conference on malarial control in Eastern Europe. Med.
paraz. i paraz.bol. 27 no.5:612-615 S-0 '58. (MIRA 12:1)
(EUROPE, EASTERN--MALARIA)

SERGIYEV, P.G.; NABOKOV, V.A.; LARYUKHIN, M.A.; SVIRIDENKO, M.A.

A knapsack sprayer developed by P.G. Sergiev and V.M. Nabokov
("Serna-4"). Med.paraz. i paraz.bol. 27 no.6:693-695 N-D '58.

(MIRA 12:2)

1. Iz sektora profilaktiki infektsiy Instituta malyarii, meditsin-
skoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya
SSSR (dir. instituta - prof. P.G. Sergiyev, zav. sektorom - prof.
V.A. Nabokov).

(INSECTICIDES,
portable sprayer (Rus))

SERGIYEV, P. G.; RYAZANTSEVA, N. YE; SMIRNOVA, YE. V.;
LOZOVSKAYA, L. S.; CHELYSHEVA, K. M.; SHAMRAYEVA, S. A.

"On the problem of active immunization and seroprophylaxis
of measles."

Report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists. 1959

SERGLIYEV, P. G., STAVROVSKAYA, V. I., LYSENKO, A. L., BRAUSE, M. B.
GLADKIKH, V. F., ZHUKOVA, T. A., GAZOLOVA, G. YE., ZAI'NOVA, N. S.,
MASHLOVSKIY, SH. D., FASTOVSKAYS, E. I., CHURNOSOVA, A. A.

"Quinocide and the prospects of acceleration of the malaria
eradication rate in the USSR."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

SERGIYEV, P.G., prof.; RYAZANTSEVA, N.Ye.; SHIRNOVA, Ye.V.; CHELYSHEVA, K.M.;
REVENOK, N.D.; KOZLOVSKAYA, L.A.; KOTSOFAE, V.A.; BORISOVA, L.S.;
GEXHTMAN, M.Ya.; SHROYT, I.G.; LAPTEVA, V.N.

Active immunization of children against measles with vaccine "C"
in an extensive epidemiological experiment. Zdravookhranenie 2 no.1:
17-20 Ja-F '59. (MIRA 12:7)

1. Iz instituta virusologii im. D.I. Ivanovskogo AMN SSSR (direktor - P.N. Kosyakov), Moldavskogo instituta epidemiologii, mikrobiologii i gigiyeny (direktor - N.N. Yezhov) i Respublikanskoy sanitarno epidemiologicheskoy stantsii Moldavskoy SSR (glavnyy vrach - A.A. Koval'ev)
2. Deystvitel'nyy chlen AMN SSSR (for Sergiyev).

(MEASLES)

SERGIYEV, P.G.; RYAZANTSEVA, N.Ye.; SMIRNOVA, Ye.V.

Development of active immunization against measles in monkeys. Vop.
virus. 4 no.5:558-562 S-O '59. (MIRA 13:2)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR.
(MEASLES, immunol.)

SERGIYEV, P.G., prof.; DUKHANINA, N.N., doktor med.nauk

Let us definitively conquer malaria. Zdorov'e 5 no.10:1-2 0 '59.

(MIRA 13:2)

1. Deystvitel'nyy chlen AMN SSSR (for Sergiyev)
(MALARIA--PREVENTION)

SERGIYEV, P.G.; DEMINA, N.A.; LYSENKO, A.Ya.

Sixth International Congress on Tropical Medicine and Malaria.
Med.paraz. i paraz.bolezn. 23 no.1:118-125 Ja-F '59.

(MIRA 12:3)

(TROPICS--DISEASES AND HYGIENE)

SERGIYEV, P.G.; RASHINA, M.G.; LYSENKO, A.Ya.

Malaria as a world problem and progress in its elimination in
the U.S.S.R. Med.paraz. i paraz.bol. 28 no.3:268-280 My-Je
'59. (MIRA 12:9)

1. Iz Instituta malyarii, meditsinskoy parazitologii i gel'-
mintologii Ministerstva zdravookhraneniya SSSR (dir. - prof.
P.G.Sergiyev).

(MALARIA, prev. & control,
in Russia (Rus))

SERGIYEV, P.G.; KROTOV, A.I.

Degree of contamination of the environment by helminth eggs during the treatment of leminthiases; experimental investigations. Med.paraz. i paraz.bol. 37 no.5:584-585 S-O '59. (MIRA 13:4)

1. Iz gel'mintologicheskogo otdela Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martainovskogo Ministerstva zdravookhraneniya SSSR (direktor instituta - prof. P.G. Sergiyev, zaveduyushchiy otделom - prof. V.P. Pod'yapol'skaya). (HELMINTHIC DISEASES transm.)

SERGIYEV, P.G.; DUKHANINA, N.N.

Appearance of active foci of malaria in areas previously
cleared of malaria. Med.paraz.i paraz.bol. 29 no.5:511-515
S-O '60. (MIRA 13:12)

1. Iz Instituta meditsinskoy parazitologii i tropicheskoy malya-
rii imeni Ye.I. Martsinovskogo Ministerstva zdravookhraneniya
SSSR (dir. instituta - prof. P.G. Sergiyev).
(MALARIA)

SERGIYEV, P.G., prof.

[Elimination of malaria in the U.S.S.R. and measures to prevent its recurrence; report at a conference devoted to diseases of tropical countries, September 1961, Tashkent]
Likvidatsiia maliarii v SSSR i mery po preduprezhdeniiu ee vozvrata; doklad na konferentsii, posviashchennoi bolezniyam v stranakh s zharkim klimatom, sentiabr' 1961 g., Tashkent.
Moskva, Medgiz, 1961. 9 p. (MIRA 17:3)

1. Deystvitel'nyy chlen AMN SSSR.

← SERGIYEV, P.G.; RASHINA, M.G.; DUKHANINA, N.N.

Eliminating malaria in the U.S.S.R. and the characteristics of the methods
used. Vest. AMN SSSR 16 no.4:19-29 '61. (MIRA 15:5)
(MALARIA--PREVENTION)

SERGIYEV, Petr G.

"Liquidation of malaria in the USSR"

report to be submitted for the United Nations Conference on the
Application of Science and Technology for the Benefit of the Less
Developed Areas - Vienna, Austria, 4-20 Feb 63

SERGIYEV, P.G., prof., red.; NIKOLAYEV, I.M., red.; CHULKOV, I.F.,
tekhn. red.

[Malaria and its prevention in the U.S.S.R.] Maliariia i
ee profilaktika v SSSR; organizatsionno-metodicheskie ma-
terialy. Moskva, Medgiz, 1963. 154 p. (MIRA 16:10)

1. Deystvitel'nyy chlen AMN SSSR (for Sergiyev).
(MALARIA--PREVENTION)

BAKULEV, A.N., otv. red.; DAVYDOVSKIY, I.P., red.; YEGOROV, B.G., red.;
ZHDANOV, D.A., red.; ZHUKOVSKIY, M.A., red.; LETAVET, A.A.,
red.; OREKHOVICH, V.N., red.; PARIN, V.V., red.; SERGIYEV,
P.G., red.; BEL'CHIKOVA, Yu.S., tekhn. red.

[Abstracts of scientific papers of the Academy of Medical Sci-
ences of the U.S.S.R. for 1956] Annotatsii nauchnykh rabot
Akademii meditsinskikh nauk SSSR za 1956 god. Otv. red. A.N.
Bakulev. Moskva, Medgiz. Books 2-3. 1959. (MIRA 17:2)

1. Akademiya meditsinskikh nauk SSSR.

SERGIYEV, P.G.; DUKHANINA, N.N.; ZHUKOVA, T.A.; LYSENKO, A.Ya.

Progress and prospects of the complete eradication of malaria
in the U.S.S.R. Med. paraz. i paraz. bol. 32 no.4:424-435
Jl-Ag '63. (MIRA 17:8)

1. Iz Ins'tituta meditsinskoy parazitologii i tropicheskoy
meditsiny imeni Ye.I. Martsinovskogo (dir. - prof. P.G.
Sergiyev) Ministerstva zdravookhraneniya SSSR.

SERGIYEV, P.G.; TIBURSKAYA, N.A.

Independent coexistence of Plasmodium vivax strains with long
and short incubation periods. Med. paraz. i paraz. bol. 32
no.5:576-580 S-0'63 (MIRA 16:12)

1. Iz Instituta meditsinskoy parazitologii i tropicheskoy me-
ditsiny imeni Ye.I.Martsinovskogo (dir. - prof. P.G.Serviyev)
Ministerstva zdravookhraneniya SSSR.

SEKIGIYEV, P.G.; TIEURSKAYA, N.A.; WRUBLEVSKAYA, O.S.

Possibility of medicinal prevention of quartan malaria during blood transfusion by the administration of galokhin to the recipient. Med. paraz. i paraz. bol. 32 no.6:696-700 N-D '63 (MIRA 18:1)

1. Iz otdela protozoologii (zav. - prof. Sh.D. Mostkovskiy)
Instituta meditsinskoy parazitologii i tropicheskoy meditsiny
imeni Ye.I. Martsinovskogo (direktor - prof. P.G.Sergiyev)
Ministerstva zdravookhraneniya SSSR.

SERGIYEV, P.G.; SHROYT, I.G.; RYAZANTSEVA, N.Ye.

Experimental study of the pathogenesis of measles. *Pediatrics* 41
[1.e. 42] no.2:28-35 F '63. (MIRA 16:4)

1. Iz laboratorii deystvitel'nogo chlena AMN SSSR prof. P.G.
Sergiyeva i Moldavskogo instituta epidemiologii, mikrobiologii
gigieny (dir. N.N.Yezhov). (MEASLES)

SERGIYEV, P.G., prof., red.; SMIRNOV, Ye.S., prof., red.;
DERBENEVA-UKHOVA, V.P., prof., red.; DETINOVA, T.S., doktor
biol. nauk, red.; LANGE, A.B., kand. biol. nauk, red.,
OSIPOVA, L.S., red.

[Problems of general zoology and medical parasitology] Voprosy
obshchei zoologii i meditsinskoy parazitologii. Moskva, Medgiz,
1962. 610 p. (MIRA 16:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for
Sergiyev). 2. Kafedra entomologii Moskovskogo gosudarstvennogo
universiteta (for Smirnov, Lange). 3. Institut meditsinskoy pa-
razitologii i tropicheskoy meditsiny imeni Ye.I.Martsinovskogo
(for Derbeneva-Ukhova, Detinova).
(ZOOLOGY) (PARASITOLOGY)
(BEKLEMISHEV, VLADIMIR NIKOLAEVICH, 189(-))

SENGIYEV, V. P.

Industrial Arts.

Experience with industrial popularization work.
Leg. prom. 12, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

POPKOV, V.I.; SERGIYEV, V.P.

[Production organization in sewing establishments] Organizatsiya proiz-
vodstva na shveinom predpriyatii. Moskva, Gos.izd-vo Ministerstva legkoi
i pishchevoi promyshl., 1953. 174 p.

(MLRA 6:12)

(Clothing industry)

SERGIYEV, V. P.

Efficient utilization of industrial resources. Leg. prom. 18 no. 8:44
Ag '58. (MIRA 11:9)

(Gorkiy--Clothing industry)

SERGIYEV, V.P.

Staged process of manufacturing men's shirts. Leg.prom. 18 no.10:17-18
0 '58. (MIRA 11:11)

(Shirts, Men's)

SERGIYEV, V.P.

What hinders the expansion of the clothing industry. Shvein.
prom. no.4:18-19 J1-Ag '59. (MIRA 13:2)

1.Gor'kovskiy sovet narodnogo khozyaystva.
(Clothing industry)

POPKOV, Vasilii Ivanovich, kand.tekhn.nauk; SERGIYEV, Vladimir Poliyenovich;
VORONIN, G.M., retsenzent; NIKITIN, V.M., retsenzent; GABOVA,
D.M., red.; KNAKNIN, M.T., tekhn.red.

[Work organization at garment factories] Organizatsiia proiz-
vodstva na shveinom predpriatii. Izd.2., perer. i dop. Moskva,
Izd-vo nauchno-tekhn.lit-ry, 1960. 202 p.

(MIRA 14:6)

(Clothing industry)

SERGIYEV, V.P.; KHRIPUNOV, V.V

"Handbook of the clothing industry worker." Shvein.prom.
no.4:34-35 JI-Ag '61. (MIRA 14:12)
(Clothing industry)

SERGIYEV, V.P. (Gor'kiy)

Bibliography and reviews. Shvein. prom. no. 3-92 Vy-Je '68.
(MTR) 18-9.

SERGIYEV, V.P.; ILINICH, B.K., red.; TRUSOV, N.S., tekhn. red.

[Organization of production at small and large capacity
clothing enterprises] Organizatsiia proizvodstva na shve-
nykh predpriyatiyakh srednei i maloi moshchnosti. Moskva,
Gosbytizdat, 1963. 115 p. (MIRA 17:2)

Sergiyeva, A.P.

49-58-3-6/19

AUTHOR: Sergiyeva, A.P.

TITLE: On Electric Charges of Cloud Particles (Ob elektricheskikh zaryadakh oblachnykh chastits)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 3, pp 347-357 (USSR)

ABSTRACT: According to Levin, L.M. (Ref.1) and Pauthenier and Cochet (Ref.2), charges have a considerable influence on the processes of coagulation of particles with radii below 10 to 15 μ . For studying the processes of coagulation and thus of the stability of aerosols it is important to measure the individual electric charges of the particles. In this paper a measuring method and an instrument are described which are intended for simultaneous measurement of the charges of a large number of particles. The instrument is based on the idea of a method described by Gillespie and Langstroth (Ref. 13), the principle of which is based on deposition of particles from the air flow in an electric field. The design of the here-described instrument differs in several respects from that of Gillespie and Langstroth. For instance, in the

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On Electric Charges of Cloud Particles.

instrument of Gillespie and Langstroth the aerosol enters into the instrument through an aerosol canal consisting of an injection needle. The stream of the aerosol is surrounded by pure air circulating at the same speed as the speed of the aerosol. Such a design is inapplicable for liquid aerosols since, in the case of flow of a thin stream of aerosol surrounded by a shell of pure air a considerable particle evaporation would take place. To eliminate this an additional device (input filter) was fitted, which is described in the paper in some detail (Fig.1, p.349). Calibration with voltages increasing from 8 V to 7 kV has shown that the method permits measuring the charges of particles with an accuracy of $\pm 13\%$ and the particle dimensions are determined with an accuracy of $\pm 4\%$. Measurements by means of the described instrument were carried out in artificial clouds produced in a special chamber; measurements under natural conditions were effected in the Elbrus Mountains at an altitude of about 2500 m. Compared with existing methods of measuring charges of a relatively small number of individual particles, the here-described method has a number of advantages. Its resolution power is higher and it permits obtaining the distribution of charges on the

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On Electric Charges of Cloud Particles.

basis of analysis of specimens containing between 50 000 and 100 000 drops and also the distribution of the charges on particles of various radii. The influence of the apparatus on the properties of the various aerosols was reduced since inside the instrument the aerosol is located in a medium of the same temperature and humidity. The here-described method enables determining the charge distribution in artificial and natural clouds, the change of this distribution with time and also the magnitude of the charge of individual droplets. Small particles with diameters from 4μ to $40-60\mu$ are caught by the instrument provided their charge is such that the e/r ratio changes between 0.4×10^{-4} and 8×10^{-4} electrostatic units per cm. The here-described method is applicable for investigating solid and liquid aerosols. There are 9 figures, 1 table and 19 references, of which 9 are Russian, 8 English, 1 French, 1 German.

ASSOCIATION: Academy of Sciences USSR, Institute of Applied Geophysics (Akademiya nauk SSSR, Institut prikladnoy geofiziki)

SUBMITTED: March 22, 1957.

AVAILABLE: Library of Congress.

Card 3/3

SOV/49-59-7-10/22

AUTHOR: Sergiyeva, A. P.

TITLE: On the Electric Charge of Cloud Droplets

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 1018-1025 and 1 inserted table (USSR)

ABSTRACT: This is the second part of an article under the same title which appeared in this journal, 1958, Nr 3. The results of measurements are illustrated in Table 1, where the number of electrified droplets in 200 to 300 cm³ of precipitation during 2 to 4 min are given. It was found that the percentage of these droplets was 10 to 30% in a newly-formed cloud and up to 60% in an existing cloud. This percentage in the latter type of cloud persisted where the predominating sign of electricity was positive or negative. The formation and dissipation of the cloud had an asymmetric distribution of electric charges and the mean absolute charge of a droplet consisted of 29-34 elementary charges (Table 3). This magnitude of a mean charge was sufficient to produce the electric coalescence.

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SOV/49-59-7-10/22

On the Electric Charge of Cloud Droplets

The dispersion of charges in droplets was observed to be much greater than that calculated theoretically (Fig 1). It was observed that new droplets had a negative charge when the relation of the ion's conductivity $\lambda_+/\lambda_- \leq 2$ in the air just prior to the cloud formation. When this ratio was > 2 , then the charge was positive. Assuming that the volumetric charge of the droplets is equal to the volumetric charge of ions, then an established stratified cloud can be considered as neutrally electricified. It should be noted that in these clouds the number of ions is inversely proportional to the number of electrified droplets (Table 5, n - number of droplets, N - number of ions). There are 5 tables, 1 figure and 13 references, of which 7 are Soviet and 6 are English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki
(Academy of Sciences USSR, Institute of Applied Geophysics)

SUBMITTED: March 3, 1958.

Card 2/2

S/0299/64/000/002/P067/P067

ACCESSION NR: AR4027239

SOURCE: RZh. Biologiya, Abs. 2p423

AUTHOR: Sergiyeva, M. G.

TITLE: Changes in the eyes of animals dying "under the ray" of a betatron

CITED SOURCE: Sb. Deystviye na organizm vy*sokoenerg. izlucheniya. Tomsk, Tomskiy un-t, 1962, 75-77

TOPIC TAGS: betatron, eye, radiation, radiation damage

ABSTRACT: In a morphological study of eyes enucleated from animals dying "under the ray" of a 25 mev betatron (irradiation dose 21600-25000 r), significant changes were observed in the cells of the eye tissues. These consisted of nuclear death and alterations in the cytoplasm of the epithelial layer, the endothelium of the cornea, the endothelium of the vessels, the chromatophores, the pigmented epithelium, and the ganglial and bipolar cells of the retina. V. Kozlov

DATE ACQ: 14Feb64

SUB CODE: LS

ENCL: 00

Card 1/1

SERGIYVA, M. T.

"Results of Gunshot wounds of the Eyes." Dr Med Sci, Tomsk
State Medical Inst imeni V. M. Molotov, Min Higher Education, Tomsk,
1954. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

BOROVKOV, V.P.; SERGIYEVICH, I.I.

The Akulov Hydraulic Engineering System. Gor.khoz.Mosk. 36
no.8:38-40 Ag '62. (MIRA 16:1)

1. Nachal'nik Upravleniya Akulovskogo gidrouzla (for Borovkov).
2. Glavnyy inzh. Upravleniya Akulovskogo gidrouzla (for
Sergiyevich).

(Moscow...Water supply)

SERGIYEVICH, Mikola; NYAKHAY, P., redaktar; KHL ENKA, A., tekhnichny redaktar.

[On native land; notes of one of "the -thirty thousand."] Na rodnoi
ziarni; zapiski trytsetsatsitysiachnika. Minsk, Dziarzh.vyd-va BSSR,
1956. 136 p. (MIRA 10:5)

(White Russia--Agriculture)

SERGIEVICH, O. P.

SERGIEVICH, O. P. - "Formation of Spatial Images in Children During the Process of Initial Study (in Connection with Mastery of Elements of Geometry and Geography)." Leningrad Order of Lenin State University imeni A. A. Zhdanov, Leningrad, 1955 (Dissertations for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

SERGIVEVICH, Z.

Evening for young mothers. Zdrav. Bel or. 5 no.2:74-75 F '59. (MIRA 12:7)
(CHILDREN--CARE AND HYGIENE)

SHISHKO, Ye.I.; SERGIYEVICH, Z.V.; PERKAL', K.I.

The first sanitary education center in the White Russian S.S.R.;
on the 40th anniversary of the Minsk City Sanitary Education
Center. Zdrav.Bel. 8 no.7:81-83 J1 '62. (MIRA 15:11)
(MINSK--PUBLIC HEALTH)

GLADUSHKO, V.I. [Hladushko, V.I.], kand. tekhn. nauk;
SERGIYEVSKA, I.V. [Serhiievs'ka, I.V.]

Retrogradation of mixed fertilizers during drying in a
pseudofluidized bed. Khim. prom. [Ukr.] no.3:41-44 J1-S '63.
(MIRA 17:8)

1. Kiyevskiy politekhnicheskii institut.

VOL'SKIY, A.N. (Moskva); AGRACHEVA, R.A. (Moskva); SERGIYEVSKAYA, D.M.
(Moskva)

Effect of the composition of waste nickel slag on the content
of nickel in them. Izv. AN SSSR. Met. i gor. delo no.4:52-57
Jl-Ag '64. (MIRA 17:9)

SERGIYEVSKAYA, L.

Brief survey of the work of Tomsk Branch of the All-Union
Botanical Society in 1932-1958. Izv. Tomsk. otd. VBO 4:150-
151 '59. (MIRA 14:6)
(Tomsk--Botanical societies)

SARILYAN, L. A.

"On the possibilities of using plant insecticides of Siberian flora," Authors: P. A. Petrishcheva, L. P. Sergiyevskaya, N. I. Yakubova, and others, In the collection: Voprosy krayevoy, stepennoy i ekaperim. parazitologii, Vol. IV, Moscow, 1949, p. 194-204.

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

SERGIYEVSKAYA L.P.

SERHIYEVSKA, L.P.; KONDRATYUK, Ye.M.

Island of pine in the Aga Steppe. Bot.zhur.[Ukr.] 10 no.1:37-43 '53.
(MLRA 6:8)
(Aga Steppe--Pine) (Pine--Aga Steppe)

SERGIYEVSKAYA, L.P.

Tansy steppes of the Transbaikalia. Izv. Tomsk. otd. VBO 4:41-49
'59. (MIRA 14:6)

1. Gerbary imeni P. N. Krylova pri Tomskom universitete imeni
V. V. Kuybysheva.

(Transbaikalia--Steppes)
(Transbaikalia--Tansy)

POLOZHIY, A.V.; REVERDATTO, V.V., prof., red.; SERGIYEVSKAYA, L.P.,
prof., red.; OSOVSKIY, A.T., tekhn. red.

[Flora of Krasnoyarsk Territory] Flora Krasnoiarskogo kraia.
Tomsk, Izd-vo Tomskogo univ. No.6. [Pea family -Papilionaceae]
Bobovye - Papilionaceae. 1960. 93 p. (MIRA 15:2)
(Krasnoyarsk Territory--Papilionaceae)

POLOZHIY, A.V.; SERGIYEVSKAYA, I.P.

Viktor Vladimirovich Reverdatto; on his 70th birthday. Bot. zhur.
46 no.9:1358-1363 S '61. (MIRA 14:9)

1. Tomskiy gosudarstvennyy universitet im. V.V.Kuybysheva.
(Reverdatto, Viktor Vladimirovich, 1891-)

KRYLOV, P.N., prof.; SERGIYEVSKAYA, L.P.; SHISHKIN, Boris
Konstantinovich, red.; MORDVINOVA, L.G., tekhn. red.

[Flora of Western Siberia; a manual for the identifica-
tion of West Siberian plants] Flora Zapadnoi Sibiri; ru-
kovodstvo k opredeleniiu zapadno-sibirskikh rastenii.
Tomsk, Izd-vo Tomskogo univ. Vol.12.(dopolnitel'nyi)
Pt.1. 1961. [3071]-3255 pp. (MIRA 16:10)

1. Chlen-korrespondent AN SSSR (for Shishkin).
(Siberia, Western--Botany)

POBEDIMOVA, Ye.G.; SERGIYEVSKAYA, L.P.

In memory of Boris Konstantinovich Shishkin (1886-1963).
Izv.SO AN SSSR no. 8. Ser. biol.-med. nauk no.2:132-134
'63. (MIRA 16:11)

*

SERGIYEVSKAYA, M. A.

Uterus - Diseases

Use of sunflower infusions in suppurative endometritis. Veterinariia 29 no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953/2 ~~1953~~ Unclassified.

SELTVERSTOV, V.M., kand. tekhn. nauk; SERGIYEVSKAYA, M.P., 1941.

Physical characteristics of the dibutyl ester of succinic acid.
(MIR-18:10)
Trudy LIT no. 75:47-49 '64.

SERGIYEVSKAYA, O. V.

Mechanism of dehydration of glycols. I. Dehydration of 2-methyl-2,5-pentanediol and 2-phenyl-2,5-pentanediol. T. A. Favorskaya and O. V. Sergiyevskaya. *J. Gen. Chem. U.S.S.R.*, 25, 1459 (1955) (Engl. translation). See C.A. 50, 4897i. B. M. R.

SERGIYEVSKAYA, O.V.

✓ Mechanism of dehydration of γ -glycols. I. Dehydration of 2-methyl-2,5-pentanediol and 2-phenyl-2,5-pentanediol. T. A. Favorskaya and O. V. Sergiyevskaya (State Univ., Leningrad). *Zhur. Obshch. Khim.* 25, 1600-13 (1955); cf. C.A. 48, 13638b. — 3-Acetylpropyl alc. and Me-MgBr gave 20% 2-methyl-2,5-pentanediol (1), b_p 124-5°.

n_D^{20} 1.4501, d_4^{20} 0.9743, and a little 2,2-dimethyltetrahydrofuran, along with 2-methyl-2-penten-5-ol, b_p 59-60°, d_4^{20} 0.8571, n_D^{20} 1.4440. I in dil. H_2SO_4 (pH 1.6) on distn. gave the above alc. and furan deriv.; distn. in the presence of traces of H_2SO_4 gave only the latter. 3-Acetylpropyl alc. and PhMgBr gave 40-50% 2-phenyl-2,5-pentanediol, b_p 162-3°, d_4^{20} 1.0791, n_D^{20} 1.5340. This refluxed with dil. H_2SO_4 (pH 1.6) 6 hrs. gave 38% 2,2-methylphenyltetrahydrofuran, b_p 107°, d_4^{20} 1.0044, n_D^{20} 1.5178; distn. of the glycol from 0.1N H_3PO_4 gave 58% furan deriv., while HCO_2H (pH 2.4) gave 50%, and acetate buffer (pH 3.7) gave 9% with residual unreacted glycol. Acetylcyclopropane and PhMgBr gave 60-75% methylphenylcyclopropylcarbinol, b_p 105-7°, d_4^{20} 1.0386, n_D^{20} 1.5370; this refluxed with 1:1 HCO_2H 1.5 hrs. gave 19% 1-phenyl-1-cyclopropylethylene, 50% 2-phenyl-2-penten-5-ol, b_p 134-7°, d_4^{20} 1.0179, n_D^{20} 1.5590, and its formate from which it was freed by refluxing with 20% K_2CO_3 ; the alc. does not form a furan deriv. on heating with HCO_2H readily, but does so with H_2SO_4 . G. M. Kosolapoff

(1)

FAVORSKAYA, T.A.; SERGIYEVSKAYA, O.V.; RYZHOVA, N.P.

Mechanism of γ -glycol dehydration. Part 3: Study of the dehydration
of 2-cyclohexylpentanediol-2,5 and pentanediol-1,4. Zhur. ob. khim.
27 no.4:937-942 Ap '57. (MLRA 10:8)

1. Leningradskiy gosudarstvennyy universitet.
(Pentanediol)

SERGIYEVSKAYA, O. V.

79-1-19/63

AUTHORS: Favorskaya, T. A. , Sergiyevskaya, O. V.

TITLE: On the Dehydration Mechanism of γ -Glycols (O mekhanizme degidratatsii γ -glikoley) V. An Investigation of the Properties and Conversions of Acetylene- γ -Glycol-3-Methylhexine-1-Diole-3,6 (V. Izucheniye svoystv i prevrashcheniy atsetilenvogo γ -glikolya-3-metilgeksin-1-diola-3,6)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp. 87-94(USSR)

ABSTRACT: The authors synthesized: acetylene- γ -glycol-3-methylhexine-1-diole-3,6 and its primary monomethylether -3-methyl-6-methoxy-hexine-1-ol-3. Under ordinary conditions the two compounds do not react with the ammonium solution of silver oxide. It is only by boiling that they form light yellow precipitations of silver derivatives which are difficult to dissolve in nitric acid and which explode in a dry state. The results of the chemical methods of investigation: The hydration, ozonization, as well as the spectra of the combined light of dispersion indicate the presence of a triple bond in the two

Card 1/3

79-1-19/63

On the Dehydration Mechanism of γ -Glycols . V. An Investigation of the Properties and Conversions of Acetylene- γ -Glycol-3-Methylhexine-1-Diole-3,6

compounds. The hydration of 3-methylhexine-1-diole-3,6 and of its ether was investigated. The synthesized carbonyl products neither react with semicarbazide nor with 2,4-dinitrophenylhydrazine; the presence of the carbonyl group in them was determined by their absorption spectra in the ultraviolet part. During standing of the ketoglycol obtained by hydration of 3-methyl-hexine-1-diole-3,6 with 2,4-dinitrophenylhydrazine dissolved in sulfuric acid a precipitation of 2,4-dinitrophenylhydrazone was formed which corresponded to the derivative of the unsaturated ketoalcohol, the product of dehydration of the ketoglycol. It was shown that the dehydration of the ketoglycol under the influence of the sulfuric-acid solution of the same composition does not take place without 2,4-dinitrophenylhydrazine. The synthesis of the methyl ether of acetopropyl alcohol is new. There are 12 references, 10 of which are Slavic.

Card 2/3

79-1-19/63

On the Dehydration Mechanism of γ -Glycols. V. An Investigation of the
Properties and Conversions of Acetylene- γ -Glycol-3-Methylhexine-1-Diole-3,6

ASSOCIATION: **Leningrad State University**
(Leningradskiy gosudarstvennyy universitet)

SUBMITTED: December 30, 1956

AVAILABLE: Library of Congress

Card 3/3

1. Chemistry 2. Dehydration

AUTHORS: Favorskaya, T. A.; Sergiyevskaya, O. V. SOV/79-28-12-15/41

TITLE: On the Dehydration Mechanism of γ -Glycols (O mekhanizme dehidratatsii γ -glikoley) VI. Investigation of the Dehydration of 3-Methyl Hexyne-1-Diol-3,6 (VI. Izucheniye dehidratatsii 3-metilgeksin-1-diola-3,6)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3232-3238 (USSR)

ABSTRACT: To obtain furan (I), an analog of the antibiotic (II) (Ref 7) the authors synthesized acetylene- γ -glycol, 3-methyl hexyn-1-diol-3,6 (Ref 4) (III), and carried out its dehydration to obtain 2,2-methyl-acetylenyl-tetrahydrofuran (IV). It turned out that the dehydration of 3-methyl hexyn-1-diol -3,6 takes place in two directions: under the formation of 2,2-methyl-acetylenyl-tetrahydrofuran, and of the alcohol 3-methyl hexene-3-in-1-ol-6, which under the present reaction conditions is polymerized for the most part. It was shown that this penin alcohol is not isomerized to the 2,2-methyl-acetylenyl-tetrahydrofuran, and that on the action of sodium deep structural changes occur on this alcohol, so that it is impossible to synthesize the 2,2-methyl-benzyl-acetylenyl-

Card 1/2

On the Dehydration Mechanism of γ -Glycols.

SOV/79-28-12-15/41

VI. Investigation of the Dehydration of β -Methyl Hexyne-1-Diol-3,6

tetrahydrofuran starting from 2,2-methyl-acetylenyl-tetrahydrofuran. It was found that in the reaction of dimethyl-acetylenyl carbinol with sodium and halogen derivatives (ethyl and benzyl bromide) in liquid ammonia medium the formation of the corresponding ethers of dimethyl-acetylenyl carbinol takes place. The numerous dehydration experiments of glycol (III) offered only small yields due to the formation of oenin alcohol (V) which in acid medium is easily polymerized and resinified (Scheme 2). There are 13 references, 9 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: June 29, 1957

Card 2/2

5.3400,5.3200

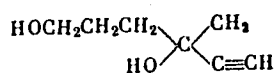
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SOV/79-30-1-27/78

AUTHORS: Favorskaya, T. A., Sergiyevskaya, O. V.

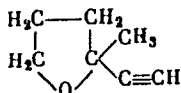
TITLE: Concerning the Mechanism of Dehydration of γ -glycols.
VII. Concerning the Reactivity of Acetylenic Hydrogen
in Substituted, Oxygen-Containing Acetylene Derivatives

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 132-
134 (USSR)

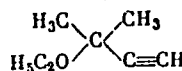
ABSTRACT: Compounds (I) through (IV) react with ammoniacal
silver nitrate with different degrees of facility:



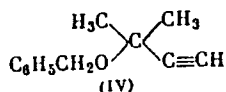
(I)



(II)



(III)



(IV)

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Concerning the Mechanism of Dehydration of
 γ -Glycols. VII. Concerning the Reactivity
of Acetylenic Hydrogen in Substituted,
Oxygen-Containing Acetylene Derivatives

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SOV/79-30-1-27/78

Compounds II and III readily form acetylides at room temperature; I reacts only on boiling, while IV fails to react even on prolonged boiling (no precipitate is formed). It was assumed that the lack of reactivity of I and IV was due to intermolecular hydrogen bonding (the geometry of these molecules precludes intramolecular hydrogen bonding). Infrared spectra (see table) indicate (by shifts of the bands) only slight hydrogen bonding in I and IV; II and III, whose spectra show more pronounced shifts (greater degree of hydrogen bonding) still have a fairly acidic acetylenic hydrogen. This indicates that the lack of reactivity of I and IV cannot be due to hydrogen bonding. Nuclear magnetic resonance spectra, a very sensitive indicator of hydrogen bonding, should provide more definite data. The IR spectra were taken by Ye. V. Shuvalova in the laboratory of V. M. Chulanovskiy. There is 1 table; and 6 references, 4 Soviet, 2 U.S. The U.S. references are: M. J. Copley,

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Concerning the Mechanism of Dehydration of
 γ -Glycols. VII. Concerning the Reactivity
 of Acetylenic Hydrogen in Substituted
 Oxygen-Containing Acetylene Derivatives

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Compound	ν (in cm^{-1})		Δ
	Pure Substance	% solution in CCl_4	
(I)	3290 (m) \	3315 (ya)	25
(II) {	3260 (m) \	3315 (ya)	55
	3295 (m) \ (BROWN)	3315 (ya) (SHARP)	20
(III) {	3260 (m) /	3315 (ya)	55 ..
	3310 (m) /		5
(IV)	3295 (m) /	3310 (ya)	15

C. E. Holley, J. Am. Chem. Soc., 61, 1599 (1939);
 S. C. Stanford, W. Gordy, J. Am. Chem. Soc., 63,
 1094 (1941).

Card 3/4

Concerning the Mechanism of Dehydration of
 γ -Glycols. VII. Concerning the Reactivity
of Acetylenic Hydrogen in Substituted
Oxygen-Containing Acetylene Derivatives

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SOV/79-30-1-27/78

ASSOCIATION: Leningrad State University (Leningradskiy
gosudarstvennyy universitet)

SUBMITTED: September 15, 1958

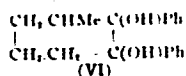
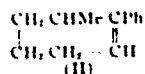
Card 4/4

SAFONOVA, T.S.; SERGIYEVSKAYA, S.

Amidoester rearrangement of di(β -chloroethyl) amides of amino-carboxylic acids. Zhur.ob.khim. 32 no.4:1351-1352 Ap '62.
(MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Alaninamide) (Rearrangements(Chemistry))

1-Methyl-2-phenylcyclohexanol and its reactions. S. I. SERGIYSEKAYA. *J. Russ. Phys.-Chem. Soc.* 62, 2187-92 (1930).—According to Murat (*C. A.* 3, 1275), 1-methyl-2-cyclohexanone (I) gives by the Grignard method the hydrocarbon II. S. obtained by the same method a 1-methyl-2-phenylcyclohexanol (III) with the same b. p. as II. III gives the corresponding cyclohexene (IV) only upon warming with 50% H_2SO_4 , and IV has a lower b. p. than II. III (62 g.), b. 131-2°, d_4^{20} 1.0283, mol. refraction 57.96, and 100% H_2SO_4 warmed with const. stirring gave IV, b. 115 S., d_4^{20} 1.0089, mol. refraction 56.70. IV may have the structure II. IV by the method of Pridzhayev gave an oxide (V), b. 136 S., d_4^{20} 1.0266, mol. refraction 56.64. V (8 g.) with 7 cc H_2O and 3 drops H_2SO_4 heated 6 hrs. at 110° in a sealed tube gave VI, a thick syrupy substance, b. 139-40°, which could not be crystd. VI may have the structure shown. II



was obtained only in very small quantities due in part probably to its further dehydration and rearrangement (of pinacol type). Heating 14 g. VI in sealed tubes with 35 cc 25% H_2SO_4 at 120-5° for 3 hrs. gave a product which was extd. with Et_2O , the Et_2O exptd. off and the residue distd. *in vacuo*. The lower boiling fraction from the prepn of VI was treated in the same way as VI. In each case 4 fractions were obtained at 16 mm (125-30°, 140-5°, 150-4°, and 156-60°) in yields of 3, 3.8, 2.5 and 2.2 g., resp. Each fraction was treated with semicarbazide. The lower-boiling ones gave a semicarbazone, m. 226-7°, which hydrolyzed to a ketone, b. 137-40°. The higher-boiling fractions gave a semicarbazone, m. 172-5°, yielding a ketone crystg. from 80% $EtOH$, m. 51-5°. The structure of the products was not detd. LEWIS W. BUTZ

ASAC 51A METALLURGICAL LITERATURE CLASSIFICATION

Ca

70

PROCESSES AND PROPERTIES NOTE

Preparation of α -diethylaminomethylbutanol. S. I. Ser-
ginskaya, A. A. Krupacheva and I. Lipovich. *Khim.
Fiz.* 1964, No. 5, 13-15. The amino alc. is ob-
tained from Et α -ethylhydroacrylate through the following
steps: $\text{EtCH}(\text{CH}_2\text{OH})\text{CO}_2\text{Et} + \text{SOCl}_2 \rightarrow \text{EtCH}(\text{CH}_2\text{Cl})\text{CO}_2\text{Et}$
 $\text{CO}_2\text{Et} + \text{NHEt}_2 \rightarrow \text{EtCH}(\text{CH}_2\text{NEt}_2)\text{CO}_2\text{Et} + \text{H}_2 \rightarrow$
 $\text{EtCH}(\text{CH}_2\text{NEt}_2)\text{CH}_2\text{OH}$. The butanol and butyl chlo-
ride are discussed. L. Nasarevich

ASAC-5LA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX										EXPERIMENTAL DATA																			
EXPERIMENTAL DATA										EXPERIMENTAL DATA																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

PROCESSING AND PREPARATION INDEX																									
1ST AND 2ND CATEGORIES													3RD AND 4TH CATEGORIES												
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50													1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50												
<i>Ca</i> Esters of 1-aminonaphthalene-4-carboxylic acid. S. I. Serikitskaya and V. V. Nesyad'ba. Russ. 45,288, Dec. 31, 1935. Esters of 1-nitronaphthalene-4-carboxylic acid are hydrogenated in an alc. soln. in the presence of Pt black catalyst.																									
ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50																									

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES IN 1-1

3,6,7,8-Tetrahydro - 1,4 - aminonaphthalenecarboxylic acid and its derivatives. S. I. Serpnevskaya and V. V. Neavad'ba. *J. Gen. Chem.* (U. S. S. R.) 6, 663-6 (1936).— $O_2NC_{10}H_7CN$ (I), m. 121°, was obtained from $O_2NC_{10}H_7NH_2$ (Schroeter, *Ann.* 426, 66) with HNO_3 and $CuCN$ by the Sandmeyer reaction. I (0.5 g.), heated with 24 cc. of concd. HCl in a sealed tube at 140° for 10 hrs., gave 4.8 g. $O_2NC_{10}H_7CO_2H$ (II), m. 181.2°. II in abs. alc. satd. with HCl and digested on a water bath for 5 hrs. formed $O_2NC_{10}H_7CO_2Et$, m. 37°. The ester reduced in alc. with Pt black by the method of Adams (*Org. Syntheses* 8, 66) gave $H_2NC_{10}H_7CO_2Et$, m. 90°. Ac deriv., m. 165.6°. This ester (1 g.), refluxed with 10.5 cc. of 0.5 *N* alc. KOH for 4 hrs. and the reaction mixt. made slightly acid with $AcOH$, gave 0.7 g. $H_2NC_{10}H_7CO_2H$, m. 188°. I, reduced with $SnCl_2$ in HCl , gave $H_2NC_{10}H_7CN$, m. 114°. HCl salt, m. 204°. Ac deriv., m. 201°. Chas. Blanc

ASB 3.1.4 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
4-Nitro-1-naphthylamine. S. I. Sergievskaya and E. A. Shklyaruk. Russ. 50,666, March 31, 1937. Rt 1-naphthylamine is nitrated with HNO_3 (d. 1.35-1.40) and the product hydrolyzed by heating with alkali.																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																										LITHO: 804107																									
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Anesthetic compounds in the naphthalene series. I
 Esters of 1-amino-4-naphthoic acid. S. I. Seigievskaya
 and V. V. Neuvad'ba. *J. Gen. Chem.* (U. S. S. R.) 8,
 924-33 (1938).—1,4- $\text{H}_2\text{NC}_{10}\text{H}_7\text{CO}_2\text{H}$, m. 80-1°, *Pr deriv.*,
 m. 82-2.5° and *iso-Pr deriv.*, m. 88.5-9.5°, prepl. from
 the corresponding nitro compds. by reduction with H and
 Pt in alc., have marked local anesthetic action, but are
 insol. in H_2O . The following *dialkylaminodkyl esters* of
 1,4- $\text{H}_2\text{NC}_{10}\text{H}_7\text{CO}_2\text{H}$ were obtained by condensation of
 1,4- $\text{O}_2\text{NC}_{10}\text{H}_7\text{COCl}$ (I) with a corresponding dialkylamino
 alc. and reduction of the nitro compd. as above or with Fe
 in dil. AcOH. 1, m. 95-6°, b. 170-1°, was prepl. by
 digesting 1,4- $\text{O}_2\text{NC}_{10}\text{H}_7\text{CO}_2\text{H}$ with 4 mols. SOCl_2 and distg.
 off the excess SOCl_2 in *vacuo*. 2-Diethylaminoethyl (HCl
 salt, m. 212°; citrate, m. 114-16° (decompn.)). 3-Di-
 ethylamino-2,2-dimethylpropyl (larocaine analog) (HCl
 salt, m. 187-8° (decompn.); citrate, m. 146-7°). 2-
 Diethylaminoisopropyl (HCl salt, m. 208°). 3-Diethyl-
 amino-1,2-dimethylpropyl (HCl salt, m. 210-12° (de-
 compn.)), is the tutocaine analog. The local anesthetic
 action of these compds. is higher than that of cocaine.
 The effect begins in 1-2 min. and lasts for 15 min. to 2.5
 hrs. with but insignificant secondary action. In their
 toxicity they occupy an intermediate position between
 procaine and cocaine. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Preparation of 1-nitro-4-naphthoic acid by saponification of its amide and nitrile. S. I. Sergievskaya and V. V. Nesvad'ba. *J. Gen. Chem.* (U. S. S. R.) 8, 934 (1938).

Contrary to the literature data 1,4- $\text{O}_2\text{NC}_6\text{H}_4\text{CO}_2\text{H}$ can be obtained in good yields from 1,4- $\text{O}_2\text{NC}_6\text{H}_4\text{CN}$ and 1,4- $\text{O}_2\text{NC}_6\text{H}_4\text{CONH}_2$ by sapon. The nitrile is sapon. by autoclaving with excess of concd. HCl at 135-140° for 6 hrs. or by refluxing with a mixt. of 50% H_2SO_4 and 100% AcOH for 18 hrs. The amide is sapon. by refluxing with excess H_3PO_4 (d. 1.75) for 1 hr. Chas. Blanc

ASAC 514 METALLURGICAL LITERATURE CLASSIFICATION

SERGIYEVSKAYA, S.I.

"The Derivatives of Naphthyl- and Tetrahydronaphthyl-oxamino Acids and the Derivation of 4-Nitro-1-Aminonaphthalene." Zhur. Obshch. Khim., 10, No. 1, 1940.
All-Union Scientific-Research Chemico-Pharmaceutical Institute imeni Sergo Ordzhonikidze
Received 14 August 1939

Report U-1526, 24 Oct 51.

CA

Anesthetic compounds in the naphthalene series. II. Esters of 4-monoalkylamino-1-naphthoic acids. S. I. Sergievskaya and K. P. Preobrazhenskaya. *J. Gen. Chem.* (U. S. S. R.) 10, 950-8 (1940); cf. C. A. 33, 1307. — 4,1- $\text{H}_2\text{NC}_6\text{H}_4\text{CO}_2\text{H}$ (I), m. 176°, was prepd. from 4,1- $\text{O}_2\text{NC}_6\text{H}_4\text{CO}_2\text{H}$ (II) on hydrogenation in alc. in the presence of a Ni or Pt catalyst or from its Et ester by sapon. with KOH. Et ester of I, m. 80°, from the Et ester of II on hydrogenation in alc. in the presence of a Ni catalyst or from I on esterification; $\text{Et}_2\text{NC}_6\text{H}_4$ ester of I (naphthocaine, III), from the corresponding ester of II on hydrogenation in alc. in the presence of Ni (HCl salt, m. 212°). $\text{EtHNC}_6\text{H}_4\text{CO}_2\text{H}$ (IV), m. 153° (decompn.), was prepd. from I by heating with HCl and aq. KOH. Et ester, m. 70-7° (HCl salt, m. 145-6°), Pr ester, m. 60° (HCl salt, m. 143-5°), $\text{Et}_2\text{NC}_6\text{H}_4$ ester, from III on heating with EtBr in alc. (HBr salt, m. 188-9°). The following monoalkyl derivs. were prepd. in an analogous manner as IV: $\text{PrHNC}_6\text{H}_4\text{CO}_2\text{H}$, m. 173-3°; Et ester, m. 38-9°; Et ester-HCl, m. 156°; $\text{Et}_2\text{NC}_6\text{H}_4$ ester-HBr, m. 182-3°. $\text{BuHNC}_6\text{H}_4\text{CO}_2\text{H}$, m. 208°; Et ester, m. 54°; Et ester-HCl, m. 143-4°; Pr ester, m. 50.5°; Pr ester-HCl, m. 114-16°; $\text{Et}_2\text{NC}_6\text{H}_4$ ester-HBr (butylnaphthocaine, V), m. 171-2° (decompn.). $\text{CH}_3\text{CH}_2\text{CH}_2\text{NHC}_6\text{H}_4\text{CO}_2\text{H}$, m. 151°; Et ester, m. 67.5-8°; Et ester-HCl, m. 147-8° (decompn.); Pr ester, m. 61-2°; $\text{Et}_2\text{NC}_6\text{H}_4$ ester-HBr, m. 191-5°. The $\text{Et}_2\text{NC}_6\text{H}_4$ ester of 1,4- $\text{Me}_2\text{CHNHCH}_6\text{H}_4\text{CO}_2\text{H}$ was prepd. from III by heating with iso-PrBr and iso-PrOH (HBr salt, m. 185-6°), and the $\text{Et}_2\text{NC}_6\text{H}_4$ ester of 1,4- $\text{Me}_2\text{CHCH}_2\text{NHC}_6\text{H}_4\text{CO}_2\text{H}$ from III by heating with iso-BuBr and iso-BuOH (HBr salt, m. 180°). Pharmacol.

studies showed that the anesthetizing property of III was increased by introducing an alkyl group into the aromatic amino group. V showed the strongest anesthetic action, the latter being higher than that of pantocaine (VI). V was less toxic than VI and caused no hyperemia. III. Esters of thiol-1-naphthoic acid and 4-aminothiol-1-naphthoic acid. S. I. Sergievskaya and A. A. Kropacheva *Ibid.* 1737-50. — Into a soln. of 0.80 g. KOH in 108 ml

EtOH and 61 ml. H_2O , H_2S was introduced at -5° until an increase in wt. of 0.5 g. was observed whereupon a soln. of 15 g. 4,1- $\text{O}_2\text{NC}_6\text{H}_4\text{COCl}$ in 100 ml. abs. benzene was added at -5 to -2° while stirring. The resulting 4-nitrothiol-1-naphthoic acid, $\text{O}_2\text{NC}_6\text{H}_4\text{COSH}$ (I), m. 86.5-7.5°, was easily oxidized to $(\text{O}_2\text{NC}_6\text{H}_4\text{COS})_2$, m. 184-5°, in the presence of air or by means of FeCl_3 , I, or $\text{K}_2\text{Cr}_2\text{O}_7$ in alc. The Me ester (II) of I, m. 112°, was obtained from the K salt on treatment with MeI in EtOH. Et ester, m. 32-3°; Pr ester, m. 39-9.5°; $\text{C}_6\text{H}_5\text{CH}_2$ ester (III), m. 85-6°; $(\text{O}_2\text{NC}_6\text{H}_4\text{COSCH}_3)_2$, m. 195-6°, from I on heating with $\text{C}_6\text{H}_5\text{CH}_2\text{Br}$ in alc. KOH; $\text{Et}_2\text{NC}_6\text{H}_4$ ester, from III on heating with Et_2NH and NaI (HCl salt (IV), m. 150-9.5°); $\text{Et}_2\text{N}(\text{CH}_2)_2$ ester-HCl, m. 150-61 (hydrate, m. 114-15°); $\text{Et}_2\text{N}(\text{CH}_2)_2$ ester parate, m. 108-9°; $\text{Et}_2\text{NC}_6\text{H}_4\text{CH}_2\text{CH}_2\text{Me}$ ester-HCl, m. 148-9°. II in alc. on heating with iron shavings and concd. HCl yielded the Me ester (V), m. 96°, of 4-aminothiol-1-naphthoic acid, $\text{H}_2\text{NC}_6\text{H}_4\text{COSH}$ (VI); Me deriv. of V, m. 191-1.5°. The following esters of VI were prepd. in an analogous manner: Et ester, m. 70-1° (Me deriv., m. 189°); Pr ester, m. 55.5-6°; $\text{Et}_2\text{NC}_6\text{H}_4$ ester-HCl, m. 183-4°; $\text{Et}_2\text{NC}_6\text{H}_4$ ester-2HCl, m.

A.S. 51.4 METALLURGICAL LITERATURE CLASSIFICATION

Alt. Union Sci. Res. Inst. Chem. Phys. - in. orig. knowledge. 0187

154° (decompn.), solidities, m. 183-4° (decompn.); $E_2N(CH_2)_3$ ester- HCl , m. 140-0.5°; $E_2N(CH_2)_3$ ester- HCl , m. 167.5-8.5°; $E_2NCH_2CH_2CH_2Me$ ester- HCl , m. 162°; HCl , m. 163-4°. ClC_6H_4 ester of $AcNHCH_2CH_2COSH$, m. 162°. Condensation of the K salt of I with $E_2NCH_2CH_2Cl$ in alc. in the heat yielded ($E_2NCH_2CH_2S$), 211 Br, m. 222-2.5°. and a compd., m. 55-7° (E_2 nitronaphtholate I). Thiol-1-naphthoic acid, $C_{10}H_7COSH$ (VII), prep'd. like I from 1- $C_{10}H_7COCl$ and KSH , was oxidized to ($C_{10}H_7COS$), m. 103-4°, by air or $FeCl_3$. Et ester, b.p. 178-9°; ClC_6H_4 ester, m. 189-91°; $E_2NCH_2CH_2$ ester- HCl , m. 152.5-3° (picrate, m. 125°); $E_2N(CH_2)_3$ ester- HCl (picrate, m. 120-1°). A pharmacol. study of the dialkylaminoalkyl esters of VI and VII, resp., revealed a great anesthetic power. The latter, however, showed too great an irritating action to be recommended for practical purposes. The former, i. e., the esters of VI, caused no irritation. When used in a concn. 1:1000 anesthesia was induced within 1-2 min. and lasted 20-30 min. Untoward effects were not observed.

Gertrude Berend

SERGIYEVSKAYA, S.I. AND KROPACHEVA, A.A.

"Anesthetic Substances of the Naphthalene Series" Part III. "The Esters of CC₂ Thionaphthoic and 4-amino-1-Thionaphthoic Acid" Zhur. Obshch. Khim., 10, No. 19-20, 1940. All-Union Scientific-Research Chemico-Pharmaceutical Institute imeni Sergo Ordzhonikidze, Moscow
Received 8 May 1940.

Report U-1612, 3 Jan 1952

SERGIEVSKAYA, S. I.

S. I. Sergievskaya and I. M. Lipovich - "Synthesis and transformations of B-(1-alkoxy tetrahydronaphthoyl-4)- propionic acids." (p. 1171)

SC: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1940, Vol. 20, No. 7

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<i>ca</i> The rearrangement of <i>or</i>(1- and 2)-tetralol allyl ethers. S. I. Sergiyevskaya and A. E. Gavrilova. <i>J. Gen. Chem. (U.S.S.R.)</i> 11, 1027-38 (1941).—1-Tetralol (I), NaOMe and $\text{CH}_3\text{CH}_2\text{Br}$ (II) give 1-tetralyl allyl ether (III), b_p 117-18°, n_D^{20} 1.574, d_4^{20} 1.020, M_R calcd. 57.60, found, 58.20, and a little allyl ether of an alkyl-1-tetralol, b_p 138-42°. Catalytic hydrogenation of III gives 1-tetralyl propyl ether, b_p 128-30°. When III is heated for 3 hrs. at 230° in a stream of CO_2 it rearranges to 2-allyl-1-tetralol (IV), b_p 139-40°, n_D^{20} 1.567, d_4^{20} 1.000, M_R calcd. 57.49, found, 57.93. If the rearrangement is run at 240° without CO_2, some I also forms. When I in MePh is treated with finely divided Na and II, it gives III, a mixt. of III and 2-allyl-1-tetralyl allyl ether (V), and IV. When IV is heated with a little $\text{C}_6\text{H}_5\text{N.HCl}$ (VI) to 200°, it forms 2,3,6,7,8,9-hexahydro-2-methyl-4-furan, b_p 120-31°. Hydrogenation of IV gives 2-propyl-1-tetralol, m. 40-1°, b_p 146-7° (Me ether b_p 163-4°). IV, MeONa, and II give V, b_p 132-4°, which pyrolyzes to 2,4-diallyl-1-tetralol, b_p 145-7°. 2-Tetralol (VII), MeONa, and II give 2-tetralyl allyl ether (VIII), b_p 128-6°, and a small amt. of a compd. b_p 131-3°. Pyrolysis of VIII gives 3-allyl-2-tetralol (IX), b_p 140-1°, d_4^{20} 1.063, n_D^{20} 1.573, M_R calcd. 57.48, found, 58.18. VII and Na in MePh give VIII, 3-allyl-2-tetralyl allyl ether (X), b_p 135-6°, and IX. When IX is heated with VI it gives 2,3,5,6,7,8-hexahydro-2-methyl-4-furan, b_p 143-6°. Hydrogenation of IX gives 3-propyl-2-tetralol (XI), b_p 143-4° (Me ether b_p 144-6°). XI, MeONa, and II give 3-propyl-2-tetralyl allyl ether, b_p 141-2°, which pyrolyzes to 1-allyl-3-propyl-2-tetralol, m. 62.5-3.5°, b_p 167-8°. With VI this forms 1,2,5,7,8,9-hexahydro-2-methyl-4-propyl-4-furan, b_p 161-3°. A test of this with the Grignard reagent shows the absence of OH groups. 1-Bromo-2-tetralol, MeONa, and II give 1-bromo-2-tetralyl allyl ether, b_p 154-6°, n_D^{20} 1.586, d_4^{20} 1.3304, M_R calcd. 66.57, found, 66.81. Pyrolysis gives 1-bromo-3-allyl-2-tetralol, b_p 167-6°, n_D^{20} 1.600, d_4^{20} 1.3768, M_R calcd. 66.36, found, 66.36. Hydrogenation over Pt gives 1-bromo-3-propyl-2-tetralol, b_p 157-9°, n_D^{20} 1.572, d_4^{20} 1.3319, M_R calcd. 66.72, found, 66.48. If the hydrogenation is carried out over Pd on C, Br is removed and XI is formed. H. M. L.																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION 6-2-1941																			

1ST AND 2ND CDS(1)										3RD AND 4TH CDS(2)									
PROCESSES AND PROPERTIES INDEX																			
COMMON ELEMENTS		ca 10 Synthesis of derivatives of 4-amino-5,6,7,8-tetrahydro-1-naphthalenecarboxylic acid by catalytic means. Analog of naphthocaine in the tetrahydronaphthalene series. S. I. Sergievskaya and K. P. Preobrazhenskaya. <i>J. Gen. Chem.</i> (U.S.S.R.) 13, 722-3(1943)(English summary). 4,1-AcNH₂CH₂CO₂Et (0.5 g.) in 15 cc. EtOH, with a Pt catalyst from 0.19 g. Pt oxide, was hydrogenated at 180-5° at 25-40 atm. H to yield <i>Et 4-acetamidotetralin-1-carboxylate</i>, m. 165-6°; the same compd. resulted on hydrogenation with Raney catalyst. Hydrolysis by aq. HCl gave the <i>Et 4-aminotetralin-1-carboxylate</i> (I), m. 90°. Similar hydrogenation of <i>Et 4-amino-1-naphthoate</i> at 170-80° gives I, m. 90°, which, treated with Ac₂O, gave the Ac deriv., m. 165-6°. <i>Et 4-nitro-1-naphthoate</i> (in EtOH) can be similarly hydrogenated to give I, m. 90°, under the above conditions. I (3.3 g.) was treated with 10 g. Et₃NCH₂CH₂OH and NaOEt (from 0.2 g. Na), and heated under reflux for 6-7 hrs. to yield, after distn. of EtOH and excess reagents, an oil, which was treated with water, extd. with Et₂O, the latter evapd. and treated with Et₂O soln. of HCl; the resulting cryst. ppt. was <i>7-diethylaminoethyl 4-aminotetralin-1-carboxylate-HCl</i>, m. 187-8° (from EtOH) ("tetracaine"); <i>citrate</i>, m. 85-8°. The product has strong anesthetic properties superior to cocaine and naphthocaine. G. M. Kosolapoff																	

 COMMON VARIABLES INDEX | || A.S.A.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION |
FROM SYNONYM										FROM BOWLING									
SYNONYM										BOWLING									
SYNONYM										BOWLING									

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<i>ca</i> Ethers of 6,8-dihydroxyquinoline. S. I. Sergievskaya and V. A. Shevelev. <i>J. Gen. Chem.</i> (U.S.S.R.) 13, 727-29 (1943) (English summary).—A series of ethers of 6,8-dihydroxyquinoline (I) were prepd. by the following general procedure. To an alc. soln. of I and the alkoxide there is added rapidly an alc. soln. of Na alkoxide there is added for 0.5 hr.; on cooling to room temp. the alkyl iodide is added dropwise after which the mixt. is stirred for 0.5 hr. until the reaction is complete, the alc. is distd. off and the resid. poured into water and extd. with Et₂O, after which the mixt. is distd. The fractions contg. the monoethers and I are combined and rubbed with EtOH to yield a cryst. monoether. The following ethers were prepd.: 6-Et m. 126-6°; 6,8-di-Et b. 170-80°; 6-Pr m. 122-3°; 6,8-di-Pr b. 183-4°; 6-Bu m. 120-1°; 6,8-di-Bu b. 195-200°; 6-Am m. 111-11.5°; 6,8-di-Am b. 220-5°; 6-hexyl m. 76.5-7°; 6,8-dihexyl b. 230-6°; 8-hexyl m. 178-87° (from CHCl₃); 6-heptyl m. 102-3°; 8-heptyl m. 173-4°; 6,8-diheptyl b. 225-7°; 6-octyl m. 85-8°; 6,8-dioctyl b. 228-33°. G. M. Kosolapoff <i>All-Union Sci. Res. Chemical-Pharmaceutical Inst. in. Ordzhonikidze</i>																			
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Anesthetics of the naphthalene series IV. Derivatives of 1-naphthaleneacrylic acid. S. I. Sergeevskaya and A. S. Blina. *J. Gen. Chem.* (U. S. S. R.) 13, 801 (1942) (English summary); *Ch. C. A.* 35, 4083p. 1-C₁₀H₇CHO (19.2 g.), 49.2 g. malonic acid and 80 cc. AcOH were heated with stirring for 12 hrs. at 85-90° to yield 60 g. (1-naphthylmethylene)malonic acid, m. 105-6°, which decarboxylates at 215° to yield 40 g. (1-naphthaleneacrylic acid) (I), m. 200-10° (from EtOH). The above, esterified with EtOH in the presence of H₂SO₄, gave the Et ester, m. 37.5-8° (from EtOH). The latter, hydrogenated with Raney Ni at room temp. and atm. pressure gave Et 1-naphthylenepropionate, b_p 191-2°. Treated with SOCl₂ yielded the corresponding chloride which with 25% NH₄OH gave 1-naphthaleneacrylamide, m. 175° (from EtOH), while Me₂NCH₂CH₂OH gave 1-C₁₀H₇CH:CHC(=O)NMe₂, isolated as the HCl salt, m. 155.5-6° (from EtOH), and Et₃NCH₂CH₂OH gave the corresponding diethylaminooethyl ester, also isolated as the HCl salt, m. 174-4.5° (from EtOH). The acid chloride treated with Me₂NCH₂CHMeC(OH)Me in benzene gave the HCl salt of 3-dimethylamino-1,2-dimethylpropyl 1-naphthaleneacrylate, m. 155.5-6° (from CCl₄ and dichloroethane). The above esters have a rather weak anesthetizing action and cause irritation of the mucous membranes. G. M. K.

used to obtain the *HCl* salt of 2-dimethylaminoethyl 4-amino-1-naphthalenepropionate, m. 168.9° (from EtOH). 1.36 g., in 150 cc. CH_2Cl_2 , Na_2CO_3 was treated with KMnO_4 soln. until a permanent color was established, then with Na_2O until the MnO_2 was dissolved, the soln. was extd. with Et_2O and the aq. layer on acidification gave 1-nitro-1-naphthoic acid, m. 219.20°; the Et_2O layer on evapn. gave 1 g. 1-nitro-1-naphthaldehyde, m. 109.7°, which, heated with PhNH_2 in EtOH, gave the corresponding amide, m. 108.85° (from EtOH); hydrolysis of the amide by 10% HCl gave the original aldehyde, m. 109.95°. This is readily oxidized by dil. KMnO_4 in Me_2CO to yield 1-nitro-1-naphthoic acid. The 1,5-dinitro-1-naphthaleneacrylic acid is oxidized by CrO_3 in AcOH to yield 1,5-dinitro-1-naphthoic acid, m/z 261° (from EtOH); Et ester, m. 142.5°; the acid heated with quinoline and Cu/Cr catalyst for 3 hrs. at reflux temp. gave 1,8- $\text{C}_{10}\text{H}_6(\text{NO}_2)_2$, m. 170° (from CHCl_3). All alkylamino esters of aminonaphthaleneacrylic acid showed strong anesthetic properties without undesirable side-reactions; the Et,N- CH_2CH_2 ester showed max. effect; the derivs. of the aminonaphthalenepropionic acid, as expected, failed to show anesthetic properties.

G. M. Kowalski

1ST AND 2ND EDITIONS		PROCESSING AND PROPERTY INDEX		3RD AND 4TH EDITIONS	
Fries rearrangement in the tetrahydronaphthalene series. 1. Fries rearrangement of the esters of 5,6,7,8-tetrahydro-1-naphthol and homologs of 5,6,7,8-tetrahydro-1-naphthol. S. I. Sergievskaya and I. M. Morozovskaya (All Union Chem. Pharm. Research Inst., Moscow). <i>J. Gen. Chem. (U.S.S.R.)</i> 14, 1107-25 (1944). It was shown that the Fries rearrangement of 5,6,7,8-tetrahydro-1-naphthol (I) esters gives 2 ketone isomers: the alkali-sol. 1,4-hydroxy ketone and 1,2-alkali-insol. 1,2-isomer. Hydrogenation of 1-naphthyl acetate in EtOH in the presence of Raney Ni or acetylation of I with AcCl gives 5,6,7,8-tetrahydro-1-naphthyl acetate (II), m. 39-40°, in contradiction with the m.p. of 73° given in Ger. pat. 508,004 (Cl. 1. 25, 775). II (32.5 g.) and 162.5 g. PhNO₂ were treated slowly with 32.2 g. AlCl₃ and, after stirring for 2 hrs., were allowed to stand overnight to yield 4-acetyl-5,6,7,8-tetrahydro-1-naphthol (III) (0.2 g.), m. 154-5° (from CCl₄), and 2-acetyl-5,6,7,8-tetrahydro-1-naphthol (IV), m. 40-5° (from dil. EtOH). If the rearrangement is conducted without solvent at 120° IV is the sole product; oxime of IV, m. 154.5-5° (from petr. ether); oxime of III, m. 184.5° (from dichloroethane). Reduction of the ketones with amalgamated Zn in 1:1 HCl at reflux gave the corresponding 2-ethyl-5,6,7,8-tetrahydro-1-naphthol, b_p 107-8°, and its 4-ethyl isomer (V), b_p 123-4°. 4-Acetyl-1-naphthol (VI) (16 g.), 64 g. amalgamated Zn, and 270 cc. 1:1 HCl gave after 30 hrs. reflux, 4-ethyl-5,6,7,8-tetrahydronaphthalene (VII), b_p 115-16°, and 4-ethyl-1-naphthol (VIII), b_p 172-4°. VI (16.5 g.), 6 g. EtI, 2.16 g. KOH, and 50 cc. EtOH gave, after heating, 5 g. 4-ethyl-1-ethoxynaphthalene, m. 79-80° (from EtOH), which by Clemmensen reduction yielded VII, b_p 101-2°, and 4-ethyl-1-ethoxynaphthalene (IX), b_p 148-50° (picrate, m. 92-3° (from EtOH)). IX, b_p 170-1°, was also obtained from VIII and EtI in the presence of alc. KOH, while similar treatment of V gave 4-ethyl-1-ethoxy-5,6,7,8-tetrahydronaphthalene, b_p 137-8°, which, on dehydrogenation with S, gave IX, b_p 153-4°. I (22.2 g.), 21 g. EtCO₂H, and 8.6 g. POCl₃ were heated to 120-30° for 6 hrs. to yield 22 g. 5,6,7,8-tetrahydro-1-naphthyl propionate (XI), b_p 152°. X (30.9 g.), 154.5 g. PhNO₂, at 128.6 g. AlCl₃ mixed with cooling for 2-3 hrs., then allowed to stand for 16-17 hrs., yielded 21 g. 2-propionyl-5,6,7,8-tetrahydro-1-naphthol (XII), m. 87.5-8.5° (from MeOH), and the corresponding 4-propionyl isomer (XIII), m. 146.5-7.5° (from benzene); oxime of XI, m. 141-1.5° (from aq. EtOH); semicarbazone of XII, m. 225-6.5° (from EtOH). Clemmensen reduction of XI gave 2-propyl-5,6,7,8-tetrahydro-1-naphthol, b_p 140-8°, m. 39-40°; similarly, XII gave 4-propyl-5,6,7,8-tetrahydro-1-naphthol (XIII), b_p 158-9°. The Fries reaction of 1-naphthyl propionate, conducted as above, gave 4-propionyl-1-naphthol, m. 189-9° (from EtOH), reduced according to Clemmensen to give 4-propyl-5,6,7,8-tetrahydronaphthalene, b_p 131-2°, and 4-propyl-1-naphthol, b_p 185-0°; the latter boiled with EtI in alc. KOH gave 4-propyl-1-ethoxynaphthalene, b_p 172-3° (picrate (XIV), m. 97-8° (from EtOH)). XIII and EtI in alc. KOH gave 4-propyl-1-ethoxy-5,6,7,8-tetrahydronaphthalene, b_p 170-2°, m. 44-5° (from MeOH), which, after dehydrogenation by means of S, gave a picrate, m.					
ASAC-51A METALLURGICAL LITERATURE CLASSIFICATION					
1ST AND 2ND EDITIONS					
3RD AND 4TH EDITIONS					

97-8°, identical with XIV. The above procedures were used in the prepn. of the following compds.: 5,6,7,8-tetrahydro-1-naphthyl butyrate, *b_p* 104-0°; 2-butyl-5,6,7,8-tetrahydro-1-naphthol (XV), *m.* 43.5-4° (from EtOH); 4-butyl isomer (XVI) of XV, *m.* 132-3° (from aq. EtOH); oxime of XV, *m.* 131.5-2° (from CCl₄); oxime of XVI, *m.* 130.5-61° (from CCl₄); 2-butyl-5,6,7,8-tetrahydro-1-naphthol (XVII), *m.* 51.5-2.5° (from aq. EtOH), *b_p* 174-6°; 4-butyl isomer of XVII, *b_p* 180-70°; 5,6,7,8-tetrahydro-1-naphthyl caproate, *b_p* 192-3°; 2-caproyl-5,6,7,8-tetrahydro-1-naphthol (XVIII), *m.* 40.5-30.5° (from EtOH) (oxime, *m.* 115.5-10.5° (from petr. ether)); 4-caproyl isomer of XVIII, *m.* 104-8.5° (from dil. MeOH) (oxime, *m.* 140-1° (from petr. ether-CCl₄)); 2-hexyl-5,6,7,8-tetrahydro-1-naphthol, *b_p* 145-6°, and its 4-hexyl isomer, *b_p* 148-90°. II. Rearrangement of complex 5,6,7,8-tetrahydro-2-naphthol ethers. *Ibid.* 15, 319-23 (1945).—The Fries rearrangement in tetrahydronaphthalenes leads to 3-substitution or to 1-substitution if the 3-position is occupied. 5,6,7,8-Tetrahydro-2-naphthol (30 g.) and 18.7 g. EtCOCl on heating for 4 hrs. gave 35 g. 5,6,7,8-tetrahydro-2-naphthyl propionate, *b_p* 189°, which, heated for 4 hrs. with 1.25 mols. AlCl₃ at 120°, gave 48% 3-propionyl-5,6,7,8-tetrahydro-2-naphthol (I), *m.* 58-9° (from MeOH); the reaction may also be effected at room temp. in PhNO₂ overnight with lowered yield; 0.57 g. I, 0.58 g. NH₄OH.HCl, 0.82 g. NaCO₃, and 10 cc. EtOH were heated for 5 hrs. to yield the corresponding oxime, *m.* 134.5-6° (from CCl₄). Reduction of I according to Clemmensen gave the 3-propyl-5,6,7,8-tetrahydro-2-naphthol (II), *b_p* 174-6°. Treatment of II with EtCOCl, as above, gave 3-propyl-5,6,7,8-tetrahydro-2-naphthyl propionate, *b_p* 192°, which, on heating with 2 mols. AlCl₃ for 3 hrs. to 150°, gave 1-propionyl-3-propyl-5,6,7,8-tetrahydro-2-naphthol, *m.* 81-3.5° (from MeOH); Clemmensen reduction yielded 1,3-dipropyl-5,6,7,8-tetrahydro-2-naphthol, *m.* 54-9° (from aq. EtOH), identical with the product from the catalytic reduction of 1-allyl-3-propyl-5,6,7,8-tetrahydro-2-naphthol.

G. M. Kosolapoff

SERGUIEVSKAYA, S. I.

"The Fries Rearrangement in the Series of Tetrahydronaphthalene. II. The Rearrangement of AR-2-Tetralol Esters." Serguievskaya, S. I. and Morosovskaya, L. I. (p. 319)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 4-5.

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		140 AND 1TH ORDERS	
<i>2d</i> Tetrahydro-<i>a</i>-1-(and 2)-naphthoic acids and their derivatives. S. I. Sergievskaya and E. G. Nikhamkina (All Union Chem. Pharm. Inst., Moscow). <i>J. Gen. Chem.</i> USSR 15, 940 (1945). <i>or</i> 1-Aminotetralin (45 g.), 75 cc. concd. HCl, and 200 cc. water were mixed and treated with sufficient water to dissolve the HCl salt; diazotization by 22.5 g. NaNO₂ in 300 cc. water at -5°, followed by addn. to 50 g. NaCN in 500 cc. water, 80 cc. 10% NH₄OH, and 33 g. CuCl, stirring for 2-3 hrs., and steam distn. gave 5,6,7,8-tetrahydro-1-naphthoic acid (15.7%), b, 130-17°, b, 150-7°. Heating 15.7 g. of above with 19.8 g. NaOH, 75 cc. EtOH, and 5 cc. water at reflux gave 13 g. of the corresponding acid (D), m. 130-40° (after crystn., m. 150-1°; solvent not given) and 0.5 g. <i>amide</i> (no m.p.); the hydrolysis may be conducted in a sealed tube at 140° for 8 hrs., using concd. HCl, although the yield is lowered (ca. 50%); the same acid was obtained after alc. KOH hydrolysis of the hydrogenation product of Et 1-naphthoate (1 (5 g.), 17 cc. abs. EtOH, and 1.5 cc. concd. H₂SO₄, heated 6 hrs., yielded the <i>Et ester</i>, b, 128-9°; hydrogenation of Et 1-naphthoate in EtOH, using Raney		10 Ni at 130° and 50 atm., gave the same ester, b, 165-70°. <i>Chloride</i> of 1, obtained by heating 12 g. 1 with 100 g. SOCl₂, b, 122-3°. Treatment of this with NH₄OH gave the <i>amide</i>, m. 181-2° (from EtOH). The chloride (11.8 g.) in dry benzene and 2 g. Et₃NCH₂CH₂OH were refluxed for 2 hrs., and after the usual treatment, treated with EtO-HCl to give 2-diethylaminoethyl 5,6,7,8-tetrahydro-1-naphthoate-HCl, m. 161-2° (from benzene). Similar procedures were used in the prepn. of 5,6,7,8-tetrahydro-2-naphthoic acid (from <i>a</i>-2-aminotetralin), b, 101-1° (30%); acid, m. 151° (from EtOH) (80%); <i>Et ester</i>, b, 135-5°, b, 147°; <i>chloride</i>, b, 115-16°; <i>amide</i>, m. 110-1° (from EtOH); 2-diethylaminoethyl ester-HCl, m. 152-3° (from benzene). The alkylamino esters are weak anesthetics. G. M. Kosolapoff			
150-154 METALLURGICAL LITERATURE CLASSIFICATION					
150-154 METALLURGICAL LITERATURE CLASSIFICATION					

1ST AND 2ND CODES		PROPERTY AND PROPERTIES INDEX		3RD AND 4TH CODES	
Tetrahydro-<i>ar</i>-1 and 2-thionaphthoic acids and their derivatives. S. I. Sergievskaya and E. G. Nikhamkina (All Union Chem. Pharm. Inst., Moscow). <i>J. Gen. Chem.</i> (U.S.S.R.) 14, 988 (1945). EtOH (100 cc.), 3.5 g. KOH, and 2.5 cc. water were added with H₂S until 3 g. wt. gain was reached. The soln. was treated with 6 g. tetrahydro-<i>ar</i>-1-naphthoyl chloride in 20 cc. benzene, stirred for 5 min., filtered, and evapd. <i>in vacuo</i> to give crude <i>K tetrahydro-ar-1-thionaphthoate</i> as a yellow oil (6.0 g.), which, treated with 5% HCl, gave the <i>free acid</i> as a yellow, rather unstable oil (1 g.) in 100 cc. EtOH was acidified with 1% HCl to Congo red and was treated with 10% FeCl₃ dropwise until pptn. began; the filtrate was again treated with FeCl₃; total yield of crude <i>disulfide of tetrahydro-ar-1-thionaphthoic acid</i> was 1 g.; recrystn. from EtOH gave 0.5 g. pure product, m. 111-12°. <i>K salt</i> of I (10.3 g.) in 200 cc. EtOH and 19 g. HCl was heated to 60-65° for 4 hrs. to give 12.4% <i>Et ester</i>, b. 113-5°; similarly, the <i>Pr ester</i> was prepd. using PrI, b. 175-6°; the use of Cl-CH₂CH₂Br gave the 2-<i>chloroethyl ester</i>, b. 184-5°, while chlorobromopropane gave the 3-<i>chloropropyl ester</i>, b. 192-3°. The latter esters gave, on treatment with Et₃NH in the presence of KI, at steam-bath temp.: 2-<i>diethylaminoethyl ester-HCl</i>, m. 134-5° (addn. of alc. HCl to the Et₃O ext.) and 3-<i>diethylaminopropyl ester-HCl</i>, m. 113-14° (from Et₃O-EtOH). Use of the same procedures starting with tetrahydro-<i>ar</i>-2-naphthoyl chloride, gave 93% <i>tetrahydro-ar-2-thionaphthoic acid</i>, yellow oil; <i>disulfide</i>, m. 120-1° (from EtOH); <i>Et ester</i> (18.5%), b. 154-5°; 2-<i>chloroethyl ester</i>, b. 181-5°; 3-<i>chloropropyl ester</i>, b. 197-8°; 2-<i>diethylaminoethyl ester-HCl</i>, m. 157-8° (from Et₃O-EtOH); 3-<i>diethylaminopropyl ester-HCl</i>, m. 117-18° (from EtOH-Et₃O). The alkamino esters are not effective anesthetics. G. M. Kosolovoff					
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COMMON VARIABLE INDEX		COMMON VARIABLE INDEX			
1ST AND 2ND CODES		PROPERTY AND PROPERTIES INDEX		3RD AND 4TH CODES	

1ST AND 2ND ORDERS										AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
COMMON ELEMENTS																													
COMMON VALUABLES																													
COMMON SYMBOLS																													
COMMON ABBREVIATIONS																													

Alkamine esters of tetrahydro-ar-4-amino-1-naphthoic acid. S. I. Sergievskaya and A. A. Kropacheva (All Union Chem. Pharm. Inst., Moscow). *J. Gen. Chem. (U.S.S.R.)* 15, 996-1000 (1945). The following new alkamine esters were prepd., all of which were found to have definite anesthetic properties. Et tetrahydro-ar-4-amino-1-naphthoate (I) (1.5 g.), 0.6 g. Me₂NCH₂CH₂OH, 0.1 g. Na, and 5 cc. abs. EtOH were heated to 130° for 0 hrs.; after removal of the EtOH and excess amino alc. *in vacuo*, the residue was poured into water and extd. with Et₂O; addn. of Et₂O-HCl to the dried ext. gave 2-dimethylaminoethyl tetrahydro-ar-4-amino-1-naphthoate-2HCl, m. 201-1.5° (from MeOH). Tetrahydro-ar-4-amino-1-naphthoic acid (1.5 g.), 0.44 g. KOH, 15 cc. EtOH, and 1.18 g. ClCH₂CH₂NEt₂ heated to 45° for 4 hrs. and allowed to stand for 18-20 hrs., heated to boiling, filtered, and concd., followed by soln. in abs. EtOH and addn. of alc. HCl, gave 3-diethylaminopropyl tetrahydro-ar-4-amino-1-naphthoate-2HCl, m. 108-9° (from EtOH). I (1.5 g.) was treated with 3 g. 4-diethylamino-1-butanol and 0.15-0.2 g. Na and the mixt. was heated on an oil bath for 6-7 hrs. (no temp. given), after which the excess amino alc. was removed *in vacuo* and the residue poured in water and extd. with Et₂O; treatment of the ext. with Et₂O-HCl gave 4-diethylaminobutyl tetrahydro-ar-4-amino-1-naphthoate-2HCl, m. 168-70° (from EtOH-Et₂O). I (1 g.), 0.3 g. Na, 5 cc. EtOH, and 9 g. 1-diethylamino-3-butanol heated for 8 hrs. on an oil bath, and treated as above, gave 3-diethylamino-1-methylpropyl tetrahydro-ar-4-amino-1-naphthoate-2HCl, m. 178-9° (from EtOH-Et₂O).

G. M. Kropacheva

condensation of 6-ethoxy-1,2,3,4-tetrahydronaphthalene with succinic anhydride and the preparation of 6-ethoxy-1,2,3,4-tetrahydronaphthylbutyrolactone. S. I. Sergiyevskaya and A. V. Danilova (All-Union Chem. Pharm. Research Inst., Moscow). *J. Gen. Chem. (U.S.S.R.)*, 16, 1077-98 (1946) (in Russian).—6-Ethoxy-1,2,3,4-tetrahydronaphthalene (30 g.), 16.5 g. succinic anhydride, and 350-400 cc. dry PhNO₂ were treated slowly with 32.5 g. AlCl₃ and stirred at room temp. 24 hrs., then 8 hrs. at 40-50°; after addn. of HCl the mass was extd. with Et₂O, from which there were obtained several compds., all of which analyzed for (ethoxystetrahydronaphthyl)propionic acid: m. 109-70°, m. 191-2°, and 153-8°. It was shown that the last two were individual compds., while the first was a mixt. of them. Similar condensation in CS₂ led to a mixt. of the above substances. The products were sepd. by crystn. from EtOH and identified as: 6-ethoxy-1,2,3,4-tetrahydro-7(or 8)-naphthylpropionic acid (I), m. 109-70° (Et ester, m. 70-80° (from EtOH)), and the 8(or 7)-naphthyl isomer (II), m. 191-2° (Et ester, m. 30-40° (from EtOH)). The isomers are best sepd. by EtOH crystn. of their Et esters. I forms an oxime, m. 149-50° (from CCl₄); oxime of II m. 143-4° (decompn., from C₆H₆Cl₂). Clemmensen reduction of I gave the corresponding butyric acid, m. 99-100° (from EtOH) (Et ester, b. 190-1°), which, on heating with P₂O₅ in PhMe, gave 1,2,3,4,5,6,7,8-octahydro- α -ketoethoxyphenanthrene, m. 101-2° (from EtOH) (oxime, m. 147-8° (from EtOH)), reduced with amalgamated Zn in HCl-PhMe to 1,2,3,4,5,6,7,8-octahydro-9-ethoxyphenanthrene (III), m. 53-3° (from EtOH). Clemmensen reduction of II gave the corresponding butyric acid, m. 100-10° (from petr. ether), which, on cyclization with P₂O₅ in boiling PhMe, gave an isomer of the ketophenanthrene deriv., m. 133-4° (from EtOH) (oxime, m. 100-70°), reduced with amalgamated Zn to III, thus showing that I and II are 7- and 8-isomers. I (3 g.) in 50 cc. 10% Na₂CO₃ was slowly treated with 30 g. 20% Na-Hg amalgam at room temp. with the gradual (3-4 hrs.) addn. of water, the mixt. then stirred 2 hrs., extd. with Et₂O to remove the vaseline which was introduced with the amalgam, after boiling 10-15 min. HCl (3%) added in slight excess; the alk. soln. acidified with the mixt. was extd. with Et₂O, after boiling 10-15 min. NaHCO₃ and the residual Et₂O soln. was freed of solvent and treated with an excess of Ba(OH)₂, followed by CO₂ treatment of the heated soln.; the filtrate was acidified with 20% H₂SO₄ and extd. with Et₂O to yield the lactone of γ -(6-ethoxy-1,2,3,4-tetrahydronaphthyl)- γ -hydroxybutyric acid, m. 64-5° (from EtOH).

G. M. Kosolapoff

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"On the condensation of α - β -thiophene- γ -butyrolactone with succinic anhydride and on the preparation of 2-thiophene-(1,4,7,8)-tetrahydro-8-yl-tyrosine." by S. I. Ser-
dyukova and A. V. Lomova (p. 116)

CC: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1940, Volume 10, No. 7

SERGIEVSKAYA, S. I.

FA 15T53

USSR/Chemistry - Ethyl Alcohol
Chemistry - Naphthalene

Feb 1947

"The Synthesis of Alpha- β -Hydroxynaphthyl-(4)-
beta-(Methylamino)-Ethanol and of Some Other Com-
pounds of the Naphthalene Series," S. I. Sergievskaya,
I. M. Lipovich, 8 pp

"Zhur Obshch Khim" Vol XVII, No 2

Synthesis of subject compound, which is shown to
have sympathomimetic properties, but is slightly
toxic.

15T53

SERGIEVSKAYA, S. I.

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001548120015-4"

"Ar-3-Vitro-and Ar-3-Amino--Tetrahydronaphthalene-1-Carbonic Acid, their Simple Deri-
vatives and Alkamine Esters" 13, No. 5, 1943; All-Union Sci Res Chemicophar Inst im.
Sergey Ordzhonikidze, Moscow. -cl943-.

CA 10

4-Nitro-5,6,7,8-tetrahydro-1-naphthalene-carboxylic acid and some of its derivatives. S. I. Sergeevskaya and S. M. Mamikole. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 874-6(1948); cf. following abstr.—1-C₁₀H₇NHAc (50 g.), 250 ml. EtOH, and 5 g. Raney Ni in a steel autoclave were treated with H at 50 atm. (initial) at 180-200° 6 hrs. and the mixt. filtered hot; the cooled filtrate yielded 38 g. 1-acetamido-5,6,7,8-tetrahydronaphthalene, m. 154°, purified by washing with EtOH; the mother liquor and washings give 11.4 g. amine mixt., m. 110-30°, comprising the above material and starting material; in view of the difficulty of sepn. it is advisable to recharge this for a subsequent run. The tetrahydro deriv. was nitrated according to Schroeter (C.A. 16, 1763) and the product converted to the 4-nitro-5,6,7,8-tetrahydro-1-naphthonitrile according to S. and Nesvad'ba (C.A. 30, 6359°), and the latter (10 g.), 250 ml. HCl, and 125 ml. AcOH heated 60-70 hrs. at 140-5° with stirring; the resulting crystals were sepd. and heated with satd. Na₂CO₃ soln., filtered, and the filtrate acidified with HCl, yielding 43% 4-nitro-5,6,7,8-tetrahydro-1-naphthalenecarboxylic acid, m. 161-2° (from 50% EtOH), which gave the Me ester, m. 71-2° (from EtOH), with dry HCl in MeOH soln. at first in the cold, then heated 6 hrs. on the water bath. The acid yields the chloride, m. 53-4° (from CCl₄ or dry benzene), on heating 7 hrs. to 70° with excess SOCl₂. The chloride with 25% NH₄OH yields the amide, m. 210-11° (from EtOH), sol. in warm EtOH, almost insol. in Et₂O, petr. ether, and benzene.

G. M. Kosolapoff

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3-Nitro- and 3-amino-5,6,7,8-tetrahydro-1-naphthalene-carboxylic acids, their simplest derivatives and alkylamino esters. S. I. Sergeevskaya and S. M. Mamikole. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 877-86(1948); cf. preceding abstr. 1. 3-Nitro-5,6,7,8-tetrahydro-1-naphthoic acid (I), m. 212-14° (from EtOH), sol. in EtOH, Me₂CO, AcOH, difficultly sol. in benzene, CHCl₃, insol. in H₂O. The mother liquor, on evapn., gave a mixt. of the 4-nitro isomer with unidentified acids; the former was best isolated as the Me ester, m. 71-2°, by satn. of the MeOH soln. with HCl and heating 6 hrs. Such a crude mixt. of nitro acids (3 g.) on esterification as above with EtOH, followed by hydrogenation over Raney Ni at room temp., gave the Et 4-amino-5,6,7,8-tetrahydro-1-naphthoate, m. 90°, which with Ac₂O gave the Ac deriv., m. 105-6° (from EtOH). I (0.7 g.) in 15 ml. MeOH satd. in the cold with HCl and heated 6 hrs. gave the Me ester, m. 30-7° (from EtOH), insol. in water, sol. in MeOH, EtOH, Et₂O, and Me₂CO; the Et ester, prepd. analogously, m. 39-40° (from EtOH), less sol. in EtOH than the Me ester. I (2 g.) and 5 g. SOCl₂ after 6 hrs. at 75° gave 1.73 g. of the chloride, m. 92-3° (from benzene), fairly stable in air; this (0.25 g.) and 5 ml. 17% NH₄OH gave the amide, m. 223-4° (from EtOH), difficultly sol. in benzene, Et₂O, and cold EtOH, sol. in hot EtOH. Hydrogenation of 2.5 g. I in 60 ml. EtOH over 1 g. Raney Ni 3 hrs. at room temp. gave 78% NH₄ acid (II), m. 185-6° (from EtOH), difficultly sol. in benzene; this and Ac₂O gave the Ac deriv., m. 210-12° (from EtOH); the NH₄ acid yields the HCl salt, m. 235° (from Et₂O-EtOH). Shaking 1.5 g. I Et ester in 40 ml. EtOH with H in the presence of 0.7 g. Raney Ni 5 hrs. at room temp. gave Et 3-acetamido-5,6,7,8-

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tetrahydro-1-naphthoate, m. 124-5° (from EtOH), when the filtered and concd. reaction mixt. was treated with Ac₂O. 2. 3-Amino-5,6,7,8-tetrahydro-1-naphthoic acid (III), m. 175-6° (from EtOH), sol. in EtOH, Me₂CO, AcOH, difficultly sol. in benzene, CHCl₃, insol. in H₂O. The mother liquor, on evapn., gave a mixt. of the 4-amino isomer with unidentified acids; the former was best isolated as the Me ester, m. 71-2°, by satn. of the MeOH soln. with HCl and heating 6 hrs. Such a crude mixt. of nitro acids (3 g.) on esterification as above with EtOH, followed by hydrogenation over Raney Ni at room temp., gave the Et 3-amino-5,6,7,8-tetrahydro-1-naphthoate, m. 100°, which with Ac₂O gave the Ac deriv., m. 105-6° (from EtOH). I (0.7 g.) in 15 ml. MeOH satd. in the cold with HCl and heated 6 hrs. gave the Me ester, m. 30-7° (from EtOH), insol. in water, sol. in MeOH, EtOH, Et₂O, and Me₂CO; the Et ester, prepd. analogously, m. 39-40° (from EtOH), less sol. in EtOH than the Me ester. I (2 g.) and 5 g. SOCl₂ after 6 hrs. at 75° gave 1.73 g. of the chloride, m. 92-3° (from benzene), fairly stable in air; this (0.25 g.) and 5 ml. 17% NH₄OH gave the amide, m. 223-4° (from EtOH), difficultly sol. in benzene, Et₂O, and cold EtOH, sol. in hot EtOH. Hydrogenation of 2.5 g. I in 60 ml. EtOH over 1 g. Raney Ni 3 hrs. at room temp. gave 78% NH₄ acid (II), m. 185-6° (from EtOH), difficultly sol. in benzene; this and Ac₂O gave the Ac deriv., m. 210-12° (from EtOH); the NH₄ acid yields the HCl salt, m. 235° (from Et₂O-EtOH). Shaking 1.5 g. I Et ester in 40 ml. EtOH with H in the presence of 0.7 g. Raney Ni 5 hrs. at room temp. gave Et 3-acetamido-5,6,7,8-

tetrahydro-1-naphthoate, m. 124-5° (from EtOH), when the filtered and concd. reaction mixt. was treated with Ac₂O. 3. 3-Diethylaminoethyl 3-amino-5,6,7,8-tetrahydro-1-naphthoate-HCl, needles, m. 167-8° (from abs. EtOH); yield 2.2 g. This was converted to the free base and the latter was hydrogenated 2 hrs. at room temp. over 0.8 g. Raney Ni in EtOH, and the product treated with alc. citric acid, giving 2-diethylaminoethyl 3-amino-5,6,7,8-tetrahydro-1-naphthoate, m. 115-18° (decomp.; from EtOH), sol. in EtOH, almost insol. in Et₂O, benzene, gives a neutral soln. in water. Me₂NCH₂CH₂OH in the above reaction gave the corresponding 2-dimethylaminoethyl ester, m. 81-2° (from EtOH), of the nitro acid; HCl salt, m. 174.5-5° (from EtOH), on hydrogenation gave the ester of the 3-NH₄ acid, decomp. 168-70° (as the 2HCl salt) (from EtOH-Et₂O), giving neutral aq. solns. I (2.8 g.), 0.7 g. KOH, and 10 ml. EtOH, treated at 60-5° with 3 g. Et₃N(CH₂)₂Cl heated 4 hrs. at 70-5°, filtered, concd., extd. with Et₂O, and the ext. washed and treated with Et₂O-HCl, yielded 2.4 g. 3-diethylaminopropyl 3-nitro-5,6,7,8-tetrahydro-1-naphthoate-HCl, m. 173-3.5° (from EtOH), which on hydrogenation in EtOH over Raney Ni 2.5 hrs. at room temp. gave the HCl salt of the corresponding NH₄ acid ester, m. 175-6° (from 95% EtOH), forms weakly alk. aq. solns. The alkylamino esters were only weak anesthetics and were not of interest in this connection; side reactions were prominent in instances in which anesthesia was achieved in rabbits.

G. M. Kosolapoff

SERGIEVSKAYA, S. I.

S. I. Sergievskaya and S. M. Lipovich, On obtaining and proving the structures of β - (1-ethoxy-5,6,7,8-tetrahydronaphthoyl-4) propionic acid. P. 1339.

1-ethoxy-5,6,7,8-tetrahydronaphthyl-4-butyric acid, its derivatives and some other compounds of the tetrahydronaphthalene series are obtained.

The Ordzhonikidze All Union Scientific
Research Chemico-Pharmaceutical Inst.
Moscow
June 7, 1947.

SO: Journal of General Chemistry (USSR) 18, (80) No. 7 (1948).

SEBGIYEVSKAJA, I. S.

58/49T22

USSR/Chemistry - Carboxylic Acids
Chemistry - Esters

Jan 49

"ar-4-Nitro- and ar-3-Nitrotetrahydronaphthalene-1-Thiocarboxylic Acids, Their Derivatives, and the Alkaminesters of ar-4-Amino- and ar-3-Amino-tetrahydronaphthalene-1-Thiocarboxylic Acids," I. S. Sebgijevskaja, S. M. Mamlofe, All-Union Sci Res Chemicheskij Institut S. Ordzhonikidze, Moscow, 7 1/4 pp

"Zhur Obshch Khim" Vol XIX, No 1

Derivatives are disulfides and esters.

Alkaminesters derived were in the first case diethylaminoethyl and diethylaminoethyl esters,

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USSR/Chemistry - Carboxylic Acids (Contd) Jan 49

and in the second case diethylaminoethyl esters from the respective acids named. Diethylaminoethyl ester of ar-4-amino-tetrahydronaphthalene-1-thiocarboxylic acid has the highest pharmacological properties. Submitted 22 Mar 47.

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4-Nitro- and 3-nitro-5,6,7,8-tetrahydro-1-naphthalene-

7-carboxylic acids, their derivatives, and alkamino esters of 4- and 3-amino-5,6,7,8-tetrahydro-1-naphthalenecarboxylic acids. S. I. Sergievskaya and S. M. Mamiole. *Zh. Obshch. Khim.* (J. Gen. Chem.) 19, 118-25 (1949); *Chem. Abstr.* 43, 2927. Addn. of 3 g. H₂S at -5° to 3.4 g. KOH in 2.9 g. H₂O and 60 ml. EtOH, followed by 6 g. 4-nitro-5,6,7,8-tetrahydro-1-naphthoic acid in dry CCl₄ at -5°, stirring 15 min., filtration, and evapn., gave K 4-nitro-5,6,7,8-tetrahydro-1-naphthalenecarboxylate; treatment with HCl gave the free acid (I) as an oil, which on drying in EtOH with Na₂SO₄ and evapn. changes to a yellow solid, m. 34.5° (yield 84%). I (0.3 g.) in 20 ml. EtOH blown with air 4 hrs. gives the diolide, (O₂NC₁₀H₇CO₂)₂N, m. 163-4° [from (CH₃)₂Cl₂]. I with 1:1 HCl in EtOH and FeCl₃ yields the same product. I K salt (5 g.) in 60 ml. EtOH and 7.5 g. BrCH₂CH₂Cl let stand 4 hrs. at 40°, nitro-5,6,7,8-tetrahydro-1-naphthoic acid, its carboxylic filtered from the KBr, evapn., and recrystd. from EtOH analog, m. 75.6° (from EtOH), m. 89.8°, yield; diolide, m. 34.5°, 1,2-dichloroethyl ester, plates, m. 50-60° (from 158.9° [from (CH₃)₂Cl₂], 146.6° [from the K salt in EtOH] and the di. insol. (O₂NC₁₀H₇CO₂)₂(CH₂)₄, m. with EtH, m. 65.6° (from EtOH), 1,2-dichloroethyl ester, 176.7° [from (CH₃)₂Cl₂]. The ester (2.8 g.), 5.6 g. Et₃N ester-HCl, m. 177.8° (from EtOH-Et₂O), and the same NH₄ and 0.1 g. NaI heated 8 hrs. to 100°, treated with ester of the 3-NH₂ analog as the HCl salt, m. 168.9° (from H₂O), and extd. with Et₂O gave, upon addn. of HCl in EtOH, also an anesthetic but has an irritant and hypertensive action.

G. M. Kosolapoff